

AMSAT News Service Weekly Bulletins
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From: CDUNCAN
To: is
CC: W1AW
Subj: ANS\$015

SB ALL @ AMSAT \$ANS-015.01
CURRENT LAUNCH DATE 21 JANUARY UTC

HR AMSAT NEWS SERVICE BULLETIN 015.01 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 15, 1990
MICROSAT - UOSAT LAUNCH SET, AGAIN

Arianespace announced January 12 that the launch of V35 is now set for January 21, 1990 at 01:35 UTC. Note that this launch time is Saturday evening in the U. S. The payload composite was returned to the launcher on Monday, January 15th.

Arianespace has made special provisions for the MICROSATs and UoSATs so that they don't have to go through another 21.5 hour period without battery charging as they did during the first transfer. This time, they expect to be off for a maximum of 16 hours.

The replacement tape recorder for SPOT-2 was installed January 11, and the SPOT people were pleased\Q!the functional testing. More importantly, NOTHING DROPPED ON THE MICROSATs or UoSATs during this critical repair operation. The work on SPOT is now finished, and the protective covers have been removed from our satellites once again.

73's WD0HHU, PY2BJ0, G7DQE

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SB ALL @ AMSAT \$ANS-015.02
AMSAT LAUNCH INFORMATION NETWORK

HR AMSAT NEWS SERVICE BULLETIN 015.02 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 15, 1990
TO ALL RADIO AMATEURS BT

Over 35 repeater groups around the U. S. and around the world are planning to carry the Ariane V-35 launch live this Saturday evening (21 January 90 at 0135 UTC). Assuming a nominal sequence of events, transmissions will begin at 0100 UTC and end at 0230 UTC.

Reservations on the telephone bridge providing ALINS audio are now closed. Those who have registered will be contacted two or three days before launch with appropriate information.

The following stations will be carrying the event on HF:

Call	Location	Frequency	Beaming
W1AW	Connecticut	phone bulletin frequencies, see QST	USA
WA3NAN	GSFC, Maryland	14.295 3.860, 7.185	Europe

W5RRR	JSC, Texas	14.280 3.840	Central, South America, and Caribbean
W6VIO	JPL, California	21.280 3.850	New Zealand / Australia
ZS6SAT,	South Africa	3.718, 7.080, 14.282 (SSB) 3.665, 7.094 (AM)	
WA0RCR,	Central USA	1.860	Central USA and Canada

In addition, an uplink to AO-13 (over Asia) will be provided by I2KBD near Milan, Italy, and an uplink to AO-10 (over Africa) will be provided by ZS6SAT. Operations downlink frequencies of 435.970 and 145.950 will be used on these satellites.

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SB ALL @ AMSAT \$ANS-015.03

JANUARY 21 LAUNCH MICROSAT KEPLERIAN ELEMENT SET

HR AMSAT NEWS SERVICE BULLETIN 015.03 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 15, 1990
TO ALL RADIO AMATEURS BT

SPOT-2 / MICROSAT / UOSAT KEPLERIAN ELEMENT SET

If the SPOT-2/Microsat/UoSat launch occurs on 21 January 90, the following element set may be used to estimate satellite positions for the first few days. Nominal launch is expected to be around 013545 UTC.

If the launch occurs on another day, simply add 0.98561226 degrees of RAAN per day to the listed value.

Following deployment, all seven satellites will be in close proximity for several days. By the end of the first week, users with high gain antennas will begin to find the cumulative position differences per satellite growing large enough to cause significant pointing errors. All users will begin to notice the changes in AOS and LOS time.

Element sets resulting from on-orbit measurements will be provided ASAP shortly after launch and for the first several days when possible until data from the standard sources becomes available.

Satellite: SPOT-2, UO-D, E, Microsat-A, B, C, D

Catalog number: not yet assigned

Epoch time: 90021.0816319

Element set: pre-launch

Inclination: 98.738 deg

RA of node: 96.9702 deg

Eccentricity: 0.00134

Arg of perigee: 110.95 deg

Mean anomaly: 297.18 deg

Mean motion 14.1988896 rev/day

Decay rate: 1.0e-06 rev/day^2

Epoch rev: 0

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SB ALL @ AMSAT \$ANS-015.04

MICROSAT AND UOSAT FREQUENCIES

HR AMSAT NEWS SERVICE BULLETIN 015.04 FROM AMSAT HQ
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MICROSAT AND UOSAT FREQUENCIES AND DEPLOYMENT ORDER

The following are the Microsat and UoSat listening frequencies, data rates, and modes for the first few weeks of operation and check out. Other frequencies and modes are available on each satellite, but these are not expected to be employed initially. The OSCAR numbers listed are, of course, tentative and assume a successful launch ahead of F0-1B. Please note updates and corrections from previously released data.

Spacecraft	OSCAR number	Frequency, MHz	Mode
UoSat D	U0-14	435.070	1200 bps AFSK (FM)
UoSat E	U0-15	435.120	1200 bps AFSK (FM)
PACSAT	A0-16	437.025	1200 bps PSK AX.25
DOVE	A0-17	145.825	1200 bps AFSK AX.25 (FM)
WEBERSAT	A0-18	437.075	1200 bps PSK AX.25
LUSAT	A0-19	437.150	1200 bps PSK AX.25
LUSAT - CW	LUSAT	437.125	12 WPM CW telemetry

Packet transmission from DOVE may be monitored with an unmodified TNC-2 or clone, using an FM receiver. The other microsats (PACSAT, WEBERSAT, and LUSAT) require an SSB receiver and TNC with a 1200 bps PSK demodulator (F0-12 compatible, NOT the 400 bps PSK demodulator used with A0-10 and A0-13).

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SB ALL @ AMSAT \$ANS-015.05
MICROSAT LAUNCH TIMELINE

HR AMSAT NEWS SERVICE BULLETIN 015.05 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 15, 1990
TO ALL RADIO AMATEURS BT

AMSAT-NA Vice President for Field Operations Jack Crabtree, AA0P, recently obtained the following preliminary launch sequence timeline from Dave Cowdin, W0HHU, AMSAT's man on the scene in Kourou, French Guiana. This schedule should be followed, at least approximately, regardless of the time and day of launch. All times are Mission Elapsed Time.

00:00	Ignition (Time is minutes:seconds)
00:04	Launch vehicle clears gantry
02:34	1st stage fuel expended
02:39	1st stage separation
02:42	2nd stage ignition
03:40	Fairing separation
04:48	2nd stage fuel expended
04:48	2nd stage separation
04:53	3rd stage ignition
16:44	3rd stage fuel expended
16:49	3rd stage separation
17:06	SPOT II separation
20:06	UOSAT D separation
20:07	UOSAT E separation
21:01	Pacsat separation
21:02	DOVE separation

21:03 WEBERSAT separation
21:04 LUSAT separation

Dave reminds us that with this configuration of the Ariane IV, there are no solid or liquid strap-on boosters. He also reports that there was a surprising amount of room left in the payload fairing in spite of the seven spacecraft mounted in it. It was necessary to add 800 pounds of lead ballast because of excess lift capability.

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SB ALL @ AMSAT \$ANS-015.06
NEW AREA COORDINATOR APPOINTED

HR AMSAT NEWS SERVICE BULLETIN 015.06 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 15, 1990
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AMSAT VP of Field Operations, Jack Crabtree, AA0P, along with AMSAT New England Regional Coordinator, Drew Deskur, KA1M, are pleased to announce the appointment of a new Area Coordinator for the state of New Hampshire. Bill Polewarczyk, WA1DMV, will assist in coordinating AMSAT activities in New Hampshire. He is a welcomed addition to the New England AMSAT Field Operations Team.

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SB ALL @ AMSAT \$ANS-015.07
OPERATIONS NET SCHEDULE

HR AMSAT NEWS SERVICE BULLETIN 015.07 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 15, 1990
TO ALL RADIO AMATEURS BT

The following is the schedule for Operations Nets for the next several weeks.

Day	UTC	Day U.S.	Freq.	NCS	Guest
20 Jan 90	1400	Saturday	435.970	N5BF	K05I
03 Feb 90	1345	Saturday	145.950	N5BF	Early Microsat News
10 Feb 90	1545	Saturday	435.970	N5BF	TBA
18 Feb 90	0530	Sat/Sun	145.950	N5BF	TBA

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SB ALL @ AMSAT \$ANS-015.08
ZRO TEST SCHEDULE

HR AMSAT NEWS SERVICE BULLETIN 015.08 FROM AMSAT HQ
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ZRO Test Schedule

Only one ZRO test remains in the current rotation:

Saturday January 20, 1990 at 15:30 UTC MODE B 145.840 MHz

ZRO brochures are available from WA5ZIB, Andy MacAllister, AMSAT V.P. of User Operations, 14714 Knightsway Drive, Houston, TX 77083 for an S.A.S.E. with one unit of postage.

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